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HAND DELIVERY VIA COURIER

January 25, 2011

Docket Control – Utilities Division
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

Re: Docket No. E-00000D-11-0017 – Perrin Ranch Wind Ten-Year Transmission Plan

Dear Sir or Madam:

Enclosed for filing in the above docket are the original and thirteen copies of the Ten-Year Transmission Plan for Perrin Ranch Wind, LLC, a wholly owned subsidiary of NextEra Energy Resources, LLC. This plan is filed in accordance with the requirements of Arizona Revised Statutes Section 40-360.02. The plan describes one project, a new 138 kV generation-tie line and associated substation facilities proposed in conjunction with the planned Perrin Ranch Wind Energy Center, a wind energy generation facility to be located north of the City of Williams in Coconino County, Arizona.

Please direct any questions regarding this filing to one of us at (602) 528-4044 (Chris Thomas) or (602) 528-4098 (Jocelyn Gibbon).

Sincerely,

Christopher D. Thomas
Jocelyn A. Gibbon

CDT:/jer
Enclosures

cc, via First Class Mail: Steve Olea
Janice Alward
Lyn Farmer
cc, via Electronic Mail: Richard Stuhan
Albert Acken
Chuck Schultz
Matthew Gomes

Arizona Corporation Commission
DOCKETED

JAN 25 2011

DOCKETED BY

Perrin Ranch Wind, LLC Ten-Year Transmission Plan

Pursuant to A.R.S. § 40-360.02(A), Perrin Ranch Wind, LLC submits its Ten-Year Transmission Plan describing a new generation-tie line (“Gen-Tie”) and associated substation facilities (together, the “Project”).

Perrin Ranch Wind, LLC is a wholly owned subsidiary of NextEra Energy Resources, LLC. It will be the owner and operator of Perrin Ranch Wind Energy Center (“Perrin Ranch Wind”), a planned new 99.2 megawatt (“MW”) wind energy facility to be located between 7 and 15 miles north of Williams in Coconino County, Arizona. Electricity generated by Perrin Ranch Wind is the subject of a 25-year power purchase agreement with Arizona Public Service Co. (“APS”).

The Gen-Tie Project consists of a new 138 kV collection substation, a new 138 kV generation-tie line, and a new 500 kV step-up substation. An associated new 500 kV 3-breaker ring interconnection switchyard on the Navajo South Transmission System, interconnecting the Gen-Tie to the existing 500 kV Moenkopi-Yavapai transmission line, will be included in the Ten-Year Plan submitted by APS as the operator of that system.

All of the Project facilities will be located within the boundary of Perrin Ranch. The land includes parcels owned by a single private landowner (Perrin Ranch, LLC) and the Arizona State Land Department, intermixed in a checkerboard pattern.

The applicable informational items required by A.R.S. § 40-360.02(C) are set forth below, to the extent known and as currently planned. A Certificate of Environmental Compatibility for relevant portions of the Project will be sought in early 2011.

1. The size and proposed route of any transmission lines (A.R.S. § 40-360.02(C)(1)):

It is anticipated that the 138 kV Gen-Tie will be constructed on monopole steel or laminated-wood poles and will be approximately 3 miles in length.

The new 138 kV collection substation will be located in portions of Sections 26, 27, 34, and/or 35 of Township 24 North, Range 1 East, Gila and Salt River Baseline and Meridian, to the south of Espee Road. The step-up substation will be located in the Southeast quarter of Section 31 of Township 24 North, Range 2 East, adjacent to the existing Navajo 500 kV Moenkopi/Yavapai transmission line. The Gen-Tie line will run between the collection substation and the step-up substation. The point of interconnection to the 500 kV Navajo South Transmission System will be included in a separate Ten-Year Transmission Plan by the line operator, APS.

A map depicting the overall Perrin Ranch Wind project site is provided as **Attachment 1**. A map detailing the two alternative sites for the collection substation, two alternative routes for the Gen-Tie, and the planned location for the 500 kV step-up and interconnection is provided as **Attachment 2**.

A diagram of the Gen-Tie and the switchyard facilities is provided as **Attachment 3**.

2. The purpose to be served by each proposed transmission line (A.R.S. § 40-360.02(C)(2)):

The Project will enable delivery of electricity from Perrin Ranch Wind by interconnecting it to a new switchyard on the Navajo South Transmission System.

Perrin Ranch Wind, a 99.2 MW wind energy facility, is planned to include 62 1.6 MW wind turbines. When completed, it will be the largest wind facility in Arizona. Perrin Ranch Wind is the subject of a 25-year PPA with APS. The Perrin Ranch Wind project will provide a clean and renewable source of energy, diversify the energy resources available to APS and the State of Arizona, allow APS to meet its obligations to acquire new renewable energy resources, and provide other socioeconomic benefits to the State.

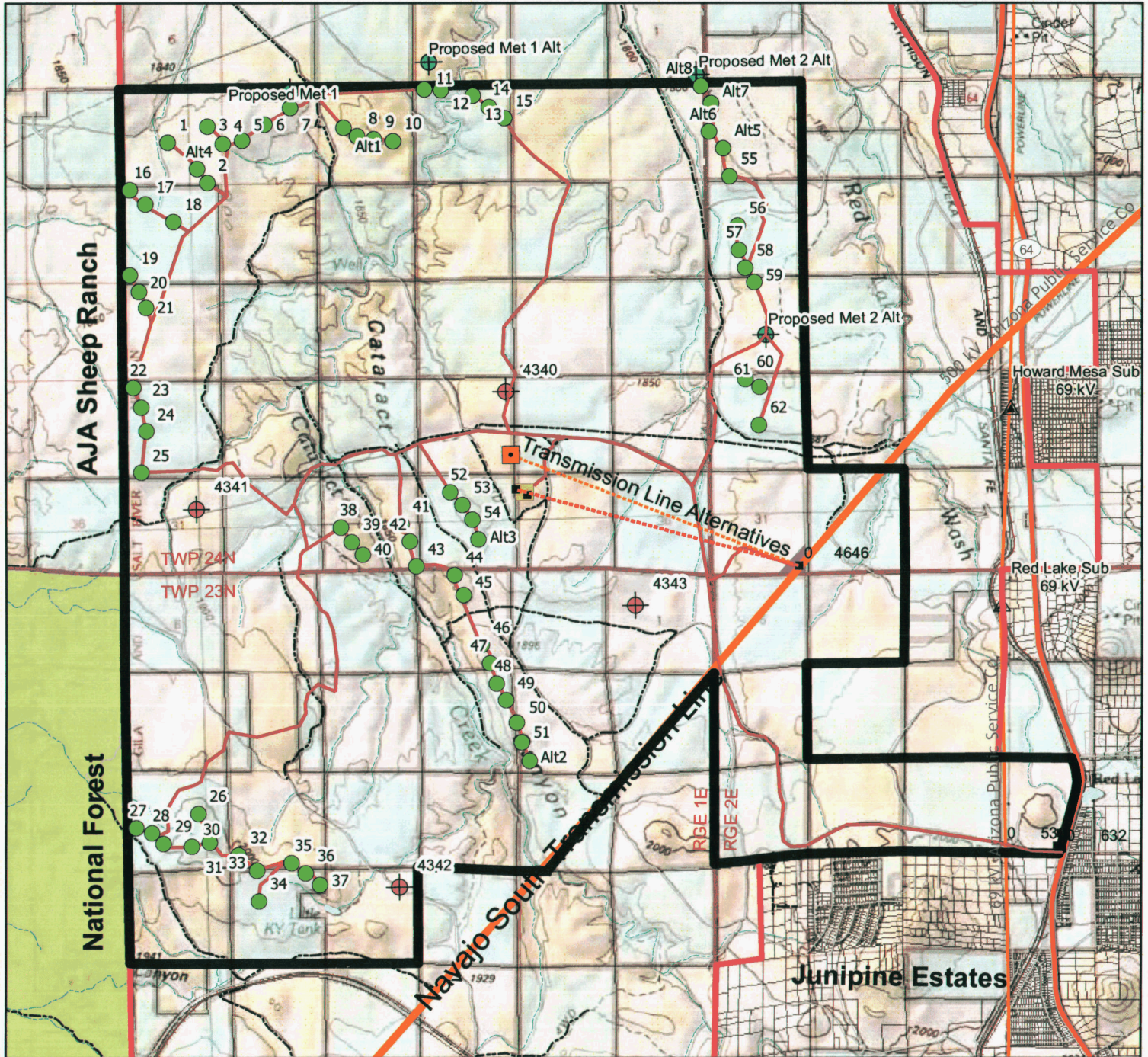
3. The estimated date by which each transmission line will be in operation (A.R.S. § 40-360.02(C)(3)):

The Project is expected to be energized by November 31, 2011 and should achieve commercial operation by December 31, 2011.

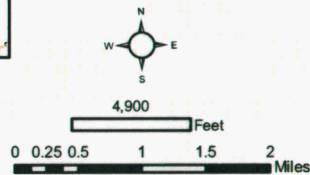
4. A power flow and stability analysis report showing the effect on the current Arizona electric transmission system. Transmission owners shall provide the technical reports, analysis or basis for projects that are included for serving customer load growth in their service territories. (A.R.S. § 40-360.02(C)(7)):

Perrin Ranch Wind, LLC submitted an Interconnection Request to APS in March 2010. The System Impact Study to be prepared by APS is expected to be complete by the end of the first quarter of 2011, with preliminary results showing that system upgrades to the Navajo South Transmission System are not required.

Attachment 4 is an RW Beck study from February 2010 showing the available transmission capacity at the desired point of interconnection on the Navajo South Transmission System.



Location Map

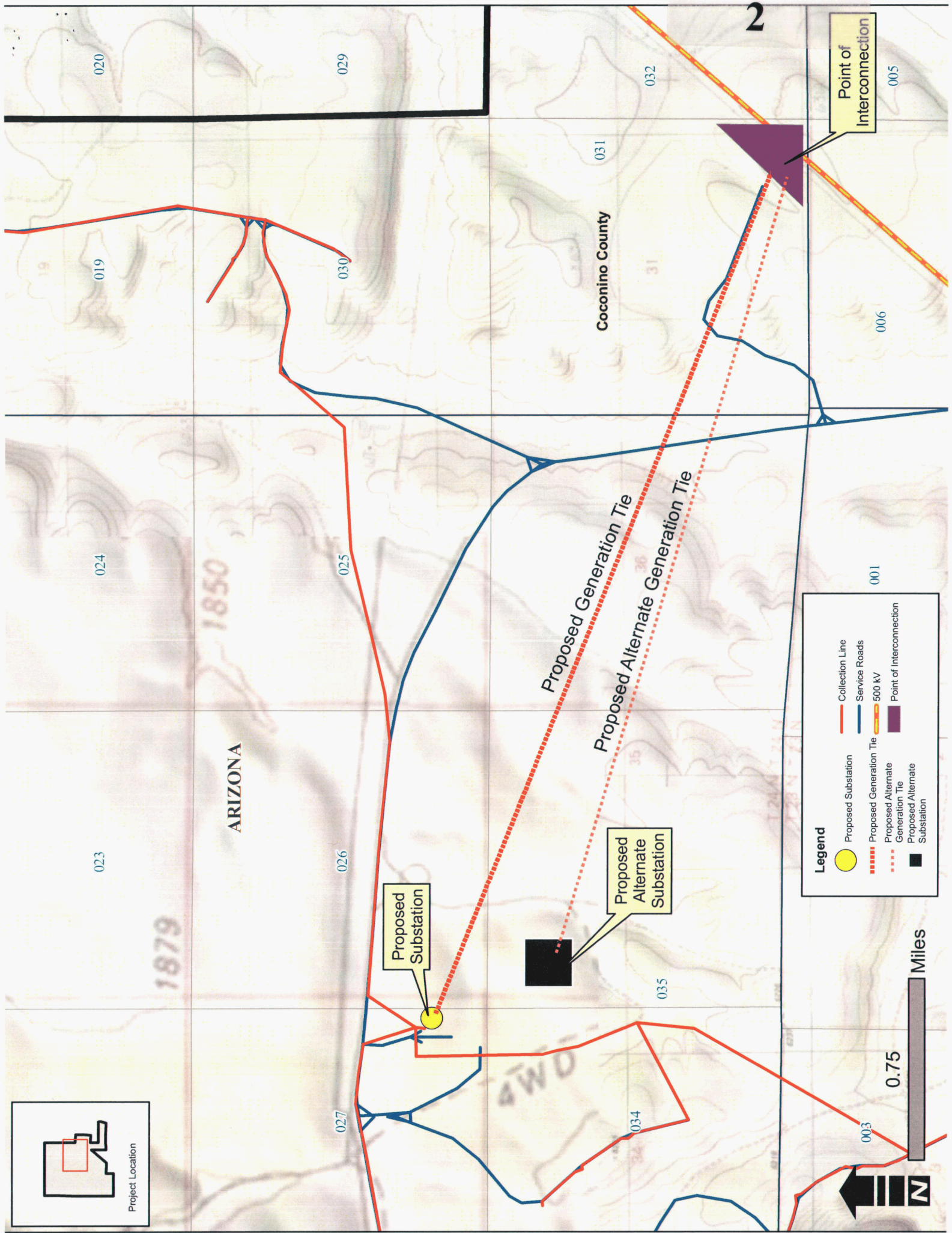
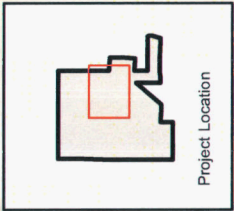


January 3, 2011

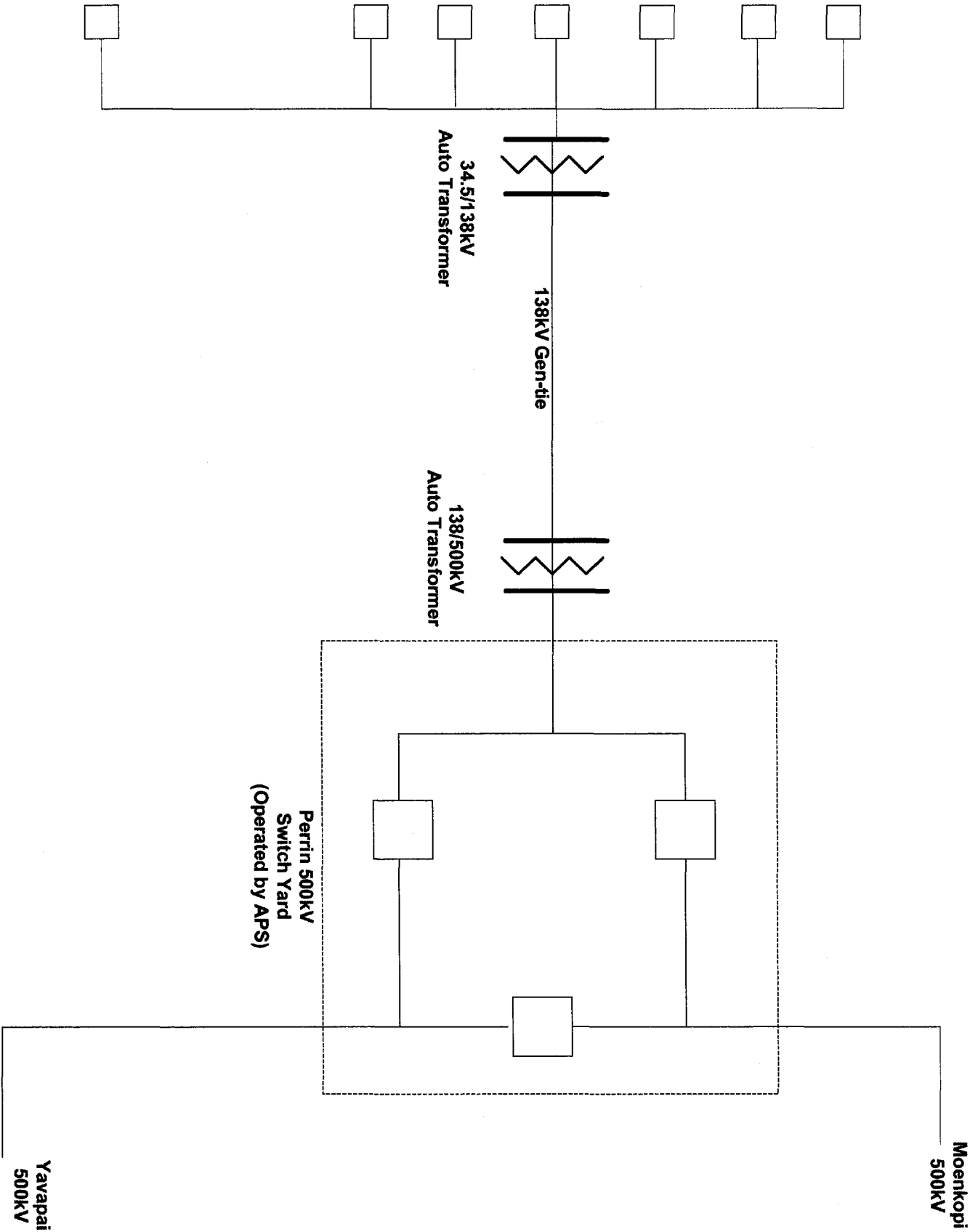
Legend

- Wind Turbines
- Proposed Transmission
- ... Alternate Transmission
- Project Roads
- Perrin Ranch Wind Project Boundary
- Perrin Ranch Property Boundary
- Proposed Substation & Operation and Maintenance Facility
- Point of Interconnection
- Alternate Substation & Operation and Maintenance Facility
- PLSS Townships
- Limited Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Railroads (Local)
- National Forest
- Planned MET
- Existing MET

7 Miles to Williams



34.5kV Feeders to Wind Turbines
(Total ~100 MW)



**ARIZONA SITES
TRANSMISSION SCREENING
(PERRIN RANCH)**



An SAIC Company

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ARIZONA SITES
TRANSMISSION SCREENING
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An SAIC Company

NextEra Energy
700 Universe Blvd.
June Beach, FL 33408

April 13, 2010

**Subject: Transmission Consultant's Overview
Perrin Ranch Site Transmission Screening**

Ladies and Gentlemen:

OVERVIEW

NextEra requested that R. W. Beck perform a screening of a site in Arizona to identify if the site could support a 150 MW wind farm (under N-1 contingency criteria and without significant transmission upgrades). The site is defined by the client as **Perrin Ranch** which is located along the 105 mile Moenkopi to Yavapai 500 kV line. The results of the report are as of April 13, 2010 and have not been updated to reflect changes in queue, transmission expansion, or deliverability (ATC).

The purpose of the screening is to determine the ability of the transmission network, to accept the project size with consideration of the queued generation and to identify potential network upgrades in the local area. The purpose of the deliverability is to identify the transmission options for delivering the project's power to regional off-takers.

TRANSMISSION SCREENING

We performed a transmission power flow screening to identify the potential upgrades required to interconnect the 150 MW Perrin Ranch Project. As part of this review, other queued projects in the vicinity of the Project were considered. Using the WECC summer peak power flow model, R.W Beck performed the screening analyses to:

- Provide the capability of the transmission lines at and from the Point of Interconnection
- Determine if a Project injection is likely to result in local system overloads on under normal or "N-1" contingency conditions.
- Summarize the potential upgrades required for the interconnection alternatives and provide a planning level cost estimate for upgrades for each of the alternative (based on typical per mile costs for transmission line rebuild)

It is noted that this interconnection screening analysis does not include potential transmission service upgrades that may be required to deliver to a specific regional off-taker. Delivery issues are discussed under the Deliverability section of this report. Additionally, the generator interconnection process will follow the applicable transmission owners Open Access Transmission Tariff ("OATT") requirements that may include a Feasibility, System Impact and Facilities Studies. The regional interconnection processes align with the Federal Energy Regulatory Commission ("FERC") generator interconnection process and under the Arizona Public Service ("APS") tariff, the Project may be able to request Network Resource Interconnection Service (NRIS) or Energy Resource Interconnection Service (ERIS). The process for evaluating the interconnection is similar, but a NRIS evaluation will include network upgrades required for delivery to the transmission owner's network load and as such a Project under an NRIS interconnection may be designated as a network resource by the transmission owner/load

serving entity without an additional network upgrades (assuming a bilateral agreement is executed with that entity).

Interconnection Screening

The point of interconnection was screened to identify the potential network upgrades required to support a 150 MW project interconnection at the site. Table 1 has the list of queued generators that are in the local area of the projects and were modeled in the transmission analysis as of April 2010.

Table 1
Local Queued Generation

<u>Queue</u>	<u>Queue #</u>	<u>Service</u>	<u>Interconnection Point</u>	<u>MW</u>	<u>Fuel</u>	<u>ISD</u>	<u>Status</u>
APS	22	ERIS	Round Valley -Seligman 230kV	260	Wind	11-Dec	FS Comp
APS	36	ERIS	Moenkopi 500kV	1000	Wind	15-Jul	SIS Comp
APS	40	ERIS	Moenkopi -El Dorado 500kV	500	Wind	15-Jul	Fes
WAPA	2007-7G	-	Peacock	500	-	9-Oct	-

FeS - Feasibility Study

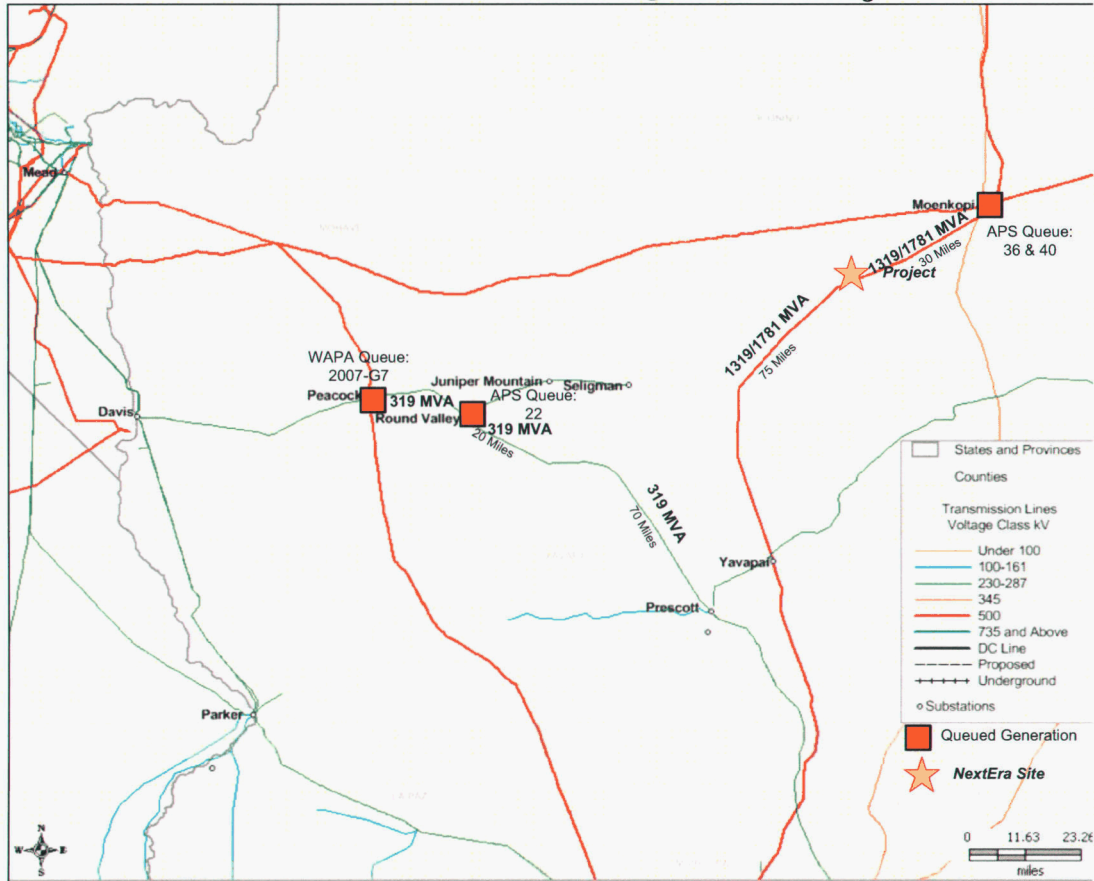
SIS - System Impact Study

FS - Facility Study

There are four projects in the APS/WAPA interconnection queue as identified in Table 1 with higher queue positions than that of the Perrin Ranch project evaluated for this analysis. The analysis included the four queued generators as well as the Perrin Ranch Project with generation maximized to stress the local area.

Figure 1 displays the approximate site location. The estimated distances along the interconnection line to the existing substations from the project proposed point of interconnection is also shown along with local queued generation and line ratings.

Figure 1
Arizona Screening
Arizona Sites & Local Queued Projects



The Project was assumed incremental to the queued projects, which were dispatched to serve regional load (not a specific generator re-dispatch or point-to-point transaction).

As would be expected with a 500 kV interconnection, the Perrin Ranch project, proposed to connect to the APS operated 500 kV line from Moenkopi to Yavapai rated at 1319/1781 MVA, did not cause any local N-0 or N-1 overloads. We note; however, the point of interconnection is along one of the WECC Paths, Path 51, as shown in Figure 2. This Path is limited for transfers from North to South flow, but is metered at the Moenkopi end. This results in the Perrin Ranch project being located south of the constraint. The Project contributes only 4% to flow over this Path in delivering to APS load.

DELIVERABILITY

When considering transmission delivery, there are various components which can significantly impact a wind project. The factors relate primarily to the market structure in the region (e.g., an Independent System Operator ("ISO")-market where the generator delivers to the market at the POI), transmission expansion plans, transmission service and regional constraints.

Regional Market

The regional transmission system is not part of an ISO controlled grid. APS is a member of the Western Electric coordinating Council ("WECC") region, and a member of the West Connect. WECC serves as a regional entity with delegated authority from NERC for the purpose of proposing and enforcing reliability standards within the WECC region.

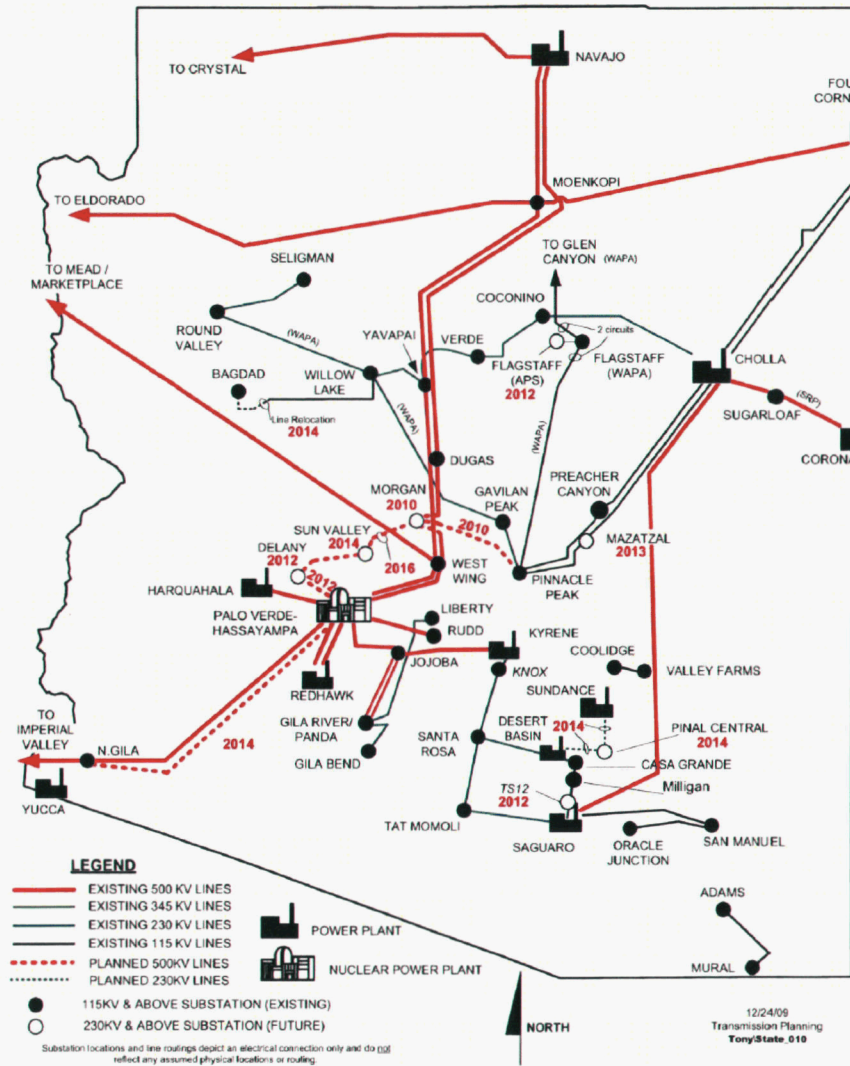
In the event the Project output had to be delivered outside of the transmission owner's system, transmission service over the transmission owner's system to the specific tie point would be requested and granted as available or a transmission service study completed to evaluate network upgrades required to support the transaction. An OASIS query is discussed under the Transmission Service section of this Report.

Transmission Expansion

There are several transmission expansion projects in APS 10-year plan, however they are located in the Metro-Phoenix as shown in Figure 2. The projects in metro Phoenix are not in the vicinity of the Projects but will allow load to be served with less congestion.

Figure 2

Arizona Screening APS EHV Transmission Expansion *APS EHV & OUTER DIVISION 115/230 KV TRANSMISSION PLANS 2010 - 2019*



Transmission Service

A large generator interconnection agreement enables the Project to interconnect and deliver at the point of interconnection (POI) to the applicable transmission system. To move power beyond the POI, transmission service is required. The APS transmission systems are not part of an ISO controlled grid. However, APS has an OATT under which each offers generator interconnection and transmission service. Under this type of “traditional” market structure, all transactions from a generator connected to the transmission provider require transmission service over that transmission provider, which can be requested

on a firm or non-firm and network or point-to-point basis. Transmission service under the OATT is requested via the Open Access Same Time Information System ("OASIS").

The highest level of transmission service is "firm" whereas non-firm service is referred to as "as available." Once firm transmission service is granted, the transmission owner incurs the cost of economic actions, i.e., redispatch generation on its system to the extent it can, to maintain the transmission schedule. This is not the case for non-firm transmission service, and in the event a transmission facility becomes overloaded by the non-firm transaction, the transaction will be curtailed. In the case of a generator, this means curtailment of the output of the generator unless transmission service to an alternate delivery point or points on the system is available. There is, therefore, a higher risk of curtailment under non-firm transmission service. Firm transmission service charges over multiple systems are "pancaked," that is a separate transmission service charge must be paid to each transmission owner/operator.

The transmission tariffs for firm transmission service, established for selected regional transmission providers, are included in Table 2 based on the filed dollar per kilowatt month rate. The APS tariff as posted on the Oati OASIS site and the Nevada Power and Los Angeles Department of Water and Power ("LADWP") rates were identified in the applicable OATT Schedule 7.

Table 2
Transmission Tariff

<u>Transmission Provider</u>	<u>Tariff (\$/kW month)</u>
Arizona Public Service	\$2.08
Western Area Public Administration	\$1.08
Nevada Power	\$1.40
Los Angeles Department of Water and Power	\$3.89

It is noted that it is not unusual for a wind resource to not obtain long-term firm transmission service (due to the lower capacity factor of the resources); however, the Project may compete for "as available" transmission service with other existing and future projects. Additionally, we note that as of July 1, 2009, West Connect members, Arizona Public Service, El Paso Electric, Nevada Power, PNM, Public Service of Colorado, Tri-State G&T, and Western (WACM, and WALC) have come together with a new hourly non-firm transmission service offering that eliminates the pancaking of transmission service charges (excluding losses and scheduling) for non-firm hourly service only. This "Regional Rate" offering is not explored further within this assessment.

Delivery Options

Delivery of the Project can be a complex issue especially in this region of pancaked transmission service charges, WECC physical path rights and potentially convoluted scheduling requirements over these paths. Additionally, the complexity is amplified by consideration of various balancing authority (not discussed herein) and transmission service options.

Figure 3 displays the projects location relative to the regional WECC paths that could impact the delivery of power from the project to load serving entities. The WECC paths are maximum path transfer capabilities derived from system studies and do not represent the ATC of the committed transactions along each path.

Figure 3

Arizona Screening WECC Relevant Paths to Neighboring Markets

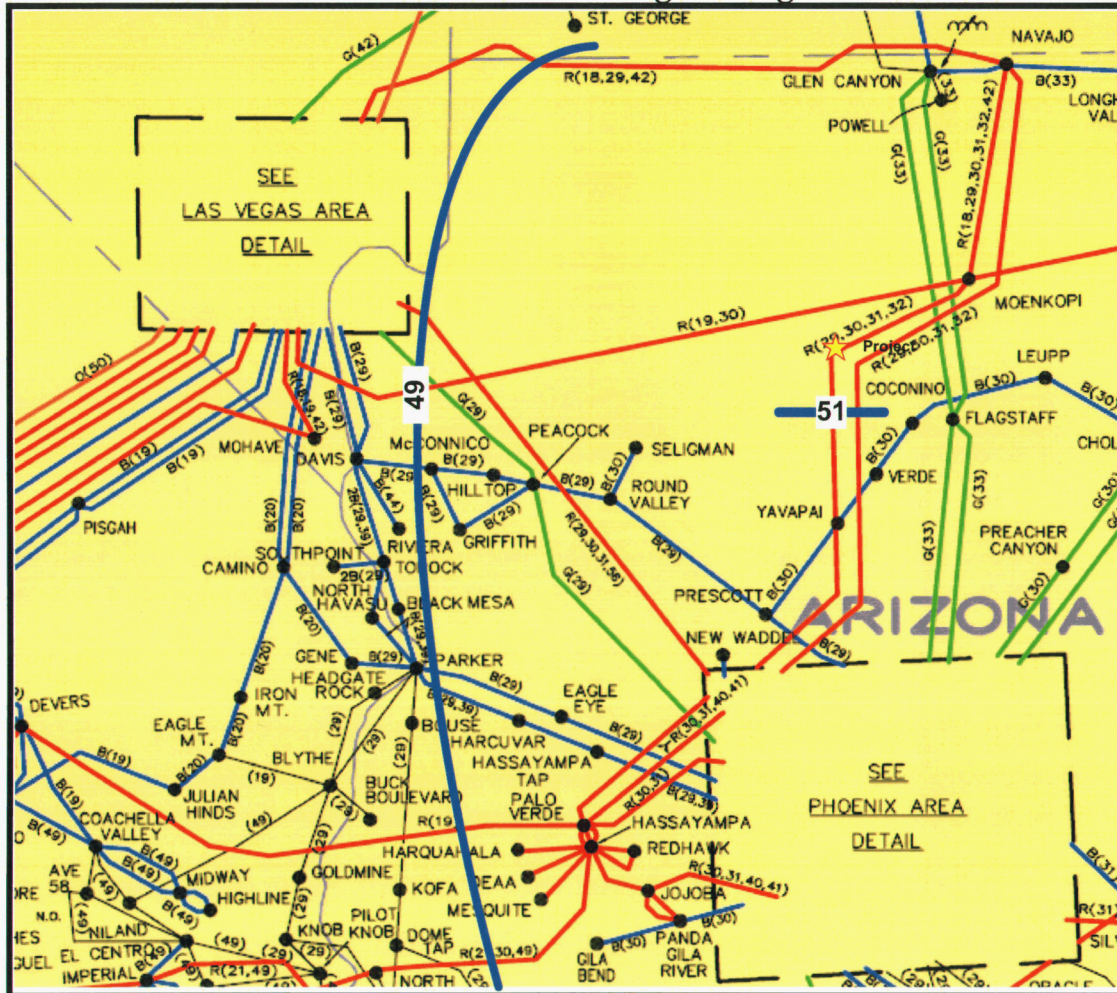


Table 3 presents the WECC paths in further detail outlining the transfer limits. Perrin Ranch is located along one of the transmission lines that make up Path 51 with APS having a 25% allocation of the transfer capability. Path 49 represents the East of Colorado Path with an East to West rating of 8055 MW

Table 3
WECC Relevant Paths

<u>Path #</u>	<u>Path Description</u>	<u>Rating (MW)</u>	<u>Constrains Delivery to Markets</u>
49	East of Colorado River (EOR)	E to W: 8055	CA & NV
51	Southern Navajo	N to S: 2264	AZ

Table 4 summarizes on a monthly basis the available transmission capacity (“ATC”) offered by regional entities for potential service from the Project sites. The ATC is a function of the Total Transfer Capability (“TTC”), which is the reliability limit of path or transmission line, minus the committed uses.

Table 4
2010 OASIS Firm Available Transmission Capacity (ATC)

Path Definition (From –To)	From-To TP*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Moenkopi- Palo Verde	APS-APS	44	44	44	44	44	44	44	44	44	44	44	44
Moenkopi -West Wing	APS-APS	44	44	44	44	44	44	44	44	44	44	44	44
West Wing – Mead	APS-APS	149	149	149	149	149	149	149	149	149	149	149	149

*TP = Transmission Provider

The Perrin Ranch site, the APS OASIS indicates that there are 44 MW of monthly firm service currently available from Moenkopi to either Palo Verde or West Wing. This is an additional indication that network upgrades may not be required to support delivery of at least a portion of Perrin Ranch.

A detailed delivery evaluation is not included as part of this scope of work. However, below, several options for delivery are summarized.

Option 1: Sale to Transmission Provider at the Project POI

If a bilateral agreement can be negotiated, this is the simplest option to deliver the Project output. Under NRIS service, the Project should be able to deliver to APS at the POI without further network upgrade transmission requirements.

Option 2: Sale to an off-taker connected to APS

There are several regional off-takers that have contracted for renewable resources. APS has direct ties to many of these off-takers. Delivery under this scenario would require a point to point transmission wheel to a delivery point between the APS system and the applicable off-taker’s system. The OASIS queries for this option have not been completed as part of this assessment.

Option 3: Sale to an off-taker at Regional Hubs

Although this region is not part of an ISO, transaction agreements can and do exist between generating resources and non load serving entities such as a power trader. These agreements frequently require that the power be delivered on a firm basis to a regional trading hub, such as Palo Verde, Mead or Four Corners. The OASIS query included in Table 4 shows that some transmission service may be available from each of the sites to Mead or Palo Verde. While Four Corners was not specifically evaluated, delivery from the sites to this hub would generally counter flow the prevailing direction of power flow. Delivery from Four Corners would, however, be subject to several existing constraints from the hub.

Option 4: Sale to an off-taker in CAISO

Within the California ISO (CAISO) market, a generator delivers its output to the grid at the POI and no separate network or point-to-point transmission service arrangements are required. Perrin Ranch is located approximately 30 miles south of Moenkopi, and it is expected that firm transmission service may be available from its POI to Moenkopi (again, considering counterflow) where the Project could deliver to the CAISO. However, Moenkopi is considered an external node to the CAISO and transfer limits are bound by complex contractual rights that have been developed over the years as joint-use transmission and generation was constructed in the Desert Southwest.

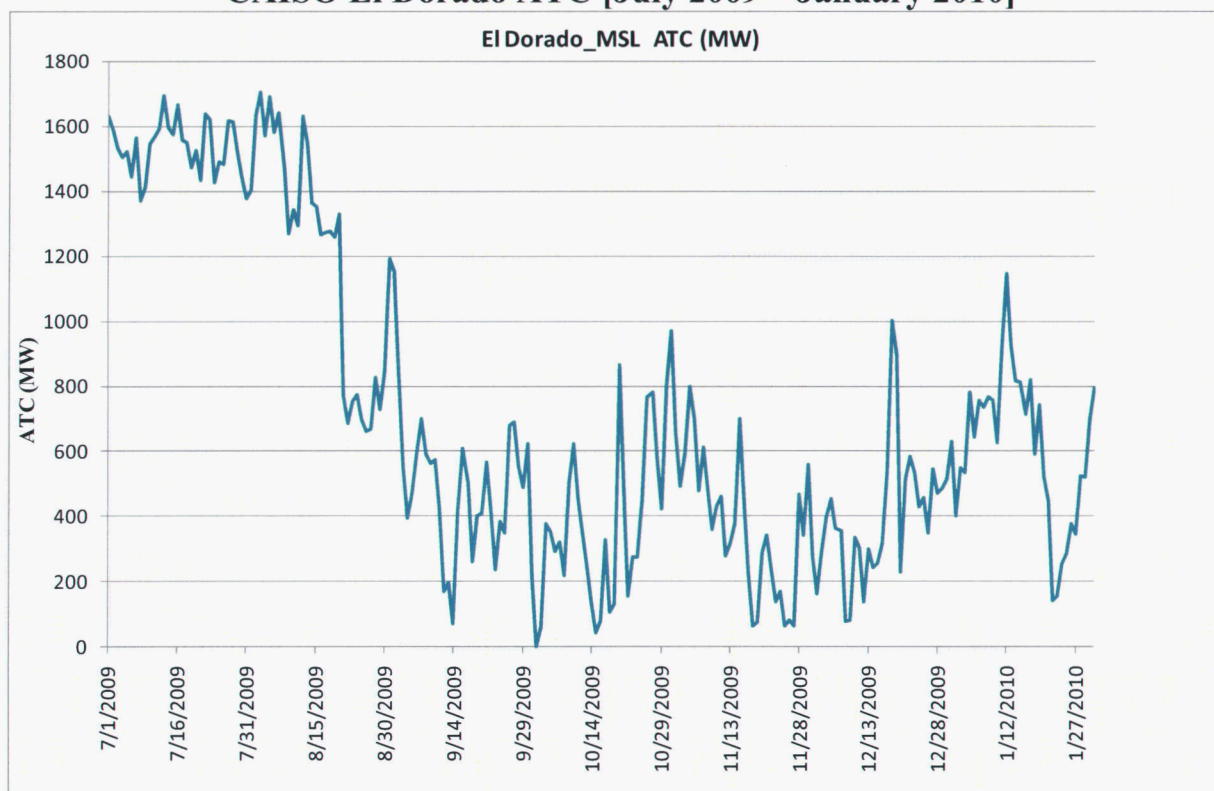
We have examined several documents, including the Year 2009 Arizona Security Monitoring Manual, the CAISO Transmission Control Agreement, the CAISO Operating Procedure No. S-320, and an APS presentation entitled APS Transmission Update dated March 14, 2007, and summarize some of the identified issues as follows:

- SCE has all rights on the Moenkopi to El Dorado 500 kV line through a long-term lease agreement with APS who owns the line. It appears that the firm rights in total are equal to 1,555 MW and are interchangeable with delivery rights over the Navajo-Crystal- McCullough 500 kV line.
- APS and CAISO also settle losses on behalf of SCE. The export schedule to APS for losses on the Four Corners -Moenkopi 500 kV line and the Eldorado-Moenkopi 500 kV line can be delivered back to APS via three market scheduling points. It is uncertain how this schedule is accounted for in computing ATC.

It is expected that the SCE schedule will require use of its existing SCE firm transmission rights to “deliver” to the CAISO. It is not apparent how much transmission may be available to SCE to deliver from Moenkopi to the CAISO, net of other scheduling requirements. We have examined the amount of ATC reported for the EL Dorado MSL path from available CAISO data. It is expected that SCE should be able to schedule power into CAISO in hours where ATC is available. Figure 4 displays the ATC for the last six months (July 2009 through January 2010).

Figure 4

Arizona Screening CAISO El Dorado ATC [July 2009 – January 2010]



The reported data shows that ATC has been available in most hours. It may be possible to deliver to SCE using a combination of point-to-point service over APS to Moenkopi and use of existing SCE transmission rights from Moenkopi.

SUMMARY

Transmission Screening

We performed a transmission power flow screening to identify the potential upgrades required to interconnect the 150 MW Perrin Ranch Project and the four APS/WAPA queued projects in the vicinity of the Project sites as identified in Table 1. We note that each of the APS queued projects has requested ERIS (as opposed to NRIS).

The Project was assumed incremental to the queued projects. The queued projects were assumed to dispatch to serve regional load. The Perrin Ranch Project did not cause any N-0 or N-1 overloads at the point of interconnection. In delivering to APS load, the Perrin Ranch Project contributes only 4% of its output to flow over Path 51, the WECC constraint in the vicinity of that Project.

Deliverability

When considering transmission delivery, there are various components which can significantly impact a wind project. The factors relate primarily to the market structure in the region (e.g., an Independent System Operator ("ISO")-market where the generator delivers to the market at the POI), transmission expansion plans, transmission service and regional constraints.

The APS transmission systems are in not part of an ISO controlled grid. A large generator interconnection agreement enables the Project to interconnect and deliver at the POI to the applicable transmission system. To move power beyond the POI, transmission service is required. Firm transmission service charges over multiple systems are "pancaked," that is a separate transmission service charge must be paid to each transmission owner/operator.

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Respectfully submitted,

R. W. BECK, INC.